

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

COMMONWELATH EDISON COMPANY)	
)	07-0540
)	
Approval of the Energy Efficiency and)	
Demand-Response Plan Pursuant to Section)	
12-103(f) of the Public Utilities Act)	

TESTIMONY OF CHRISTOPHER C. THOMAS
ON BEHALF OF THE CITIZENS UTILITY BOARD

CUB Exhibit 1.0

December 14, 2007

ICC DOCKET NO. 07-0540

DIRECT TESTIMONY OF CHRISTOPHER C. THOMAS

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Exhibits

- 1.01 Docket Summary for Christopher C. Thomas
- 1.02 Good Sense Presentation
- 1.03 Jason Black paper
- 1.04 ComEd’s Response to CUB Discovery Request 1.19
- 1.05 ComEd Response to CUB 1.09.
- 1.06 ComEd Response to CUB DR 1.13
- 1.07 ComEd Response to CUB DR 1.15.

1 **I. STATEMENT OF QUALIFICATIONS**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Christopher C. Thomas. My business address is 208 S. LaSalle Street, Suite
4 1760, Chicago, IL 60604-1003.

6 **Q. WHAT IS YOUR PRESENT OCCUPATION?**

7 A. I am employed by the Citizens Utility Board (“CUB”) as the Director of Policy. My
8 duties include development of CUB’s policy positions, filing expert testimony before the
9 Illinois Commerce Commission (“ICC” or “Commission”) on CUB’s behalf, and
10 management of the Policy Department. My responsibilities also include serving as
11 CUB’s voting representative to the PJM member committee and working to develop
12 consumer sector positions within the MISO Advisory Committee.

14 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.**

15 A. My professional career includes eight years as a utility regulatory economist. I started my
16 career as a regulatory economist in the Telecommunications Department of the Missouri
17 Public Service Commission (“MoPSC”). While with the MoPSC, I filed testimony or
18 affidavits in 11 different dockets. I became a CUB employee in September 2004, and have
19 filed testimony before the ICC in numerous dockets. CUB Exhibit 1.01, attached to this
20 testimony, is a list of the dockets in which I have filed testimony and a brief description of
21 the nature of each docket.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I have a Bachelor's degree in Business Administration with a concentration in Finance and a minor in Economics from Truman State University, and a Master's degree in Economics and Finance from Southern Illinois University, Edwardsville.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the expansion of the Nature First program that Commonwealth Edison Company ("ComEd" or "the Company") has proposed to meet the demand response standards of Section 12-103(c) of the Public Utilities Act ("PUA" or "the Act"). This Section requires electric utilities to implement "cost-effective demand response measures to reduce peak demand by 0.1% over the prior year for eligible retail customers." 220 ILCS 5/12-103(c). There are two general problems with the Company's plan and supporting testimony:

- 1) Cost estimates provided for the Nature First expansion, which ComEd used to develop the revenue requirement that it proposes to recover through Rider EDA, appear to be inflated.
- 2) Rider EDA does not appear to include all offsetting revenues that ComEd could receive from the PJM Interconnection LLC ("PJM"), energy markets.

47 **Q. WHAT IS COMED'S NATURE FIRST PROGRAM?**

48 A. Nature First is an air conditioner cycling program for residential customers with central
49 air conditioning units. Essentially, ComEd installs a radio-controlled switch on the
50 compressor of each participant's central air conditioner. This switch allows ComEd to
51 turn the compressor on and off during for short periods of time on peak summer days
52 (commonly referred to as cycling). In return, customers receive bill credits for
53 participating in the program, depending on their level of participation, which are funded
54 by revenues from the PJM administered wholesale markets. Cycling air conditioners
55 reduces load during peak times and acts as a relief valve against stress on the distribution
56 system. Using an air conditioner cycling program to reduce demand during peak times
57 also reduces electricity prices.

58
59 **Q. ARE YOU CONCERNED ABOUT THE IMPACT THAT DIRECT LOAD**
60 **CONTROL WILL HAVE ON CUSTOMER COMFORT?**

61
62 A. Of course. Customer comfort is one of CUB's foremost concerns. However, studies
63 have found that direct load control can achieve significant peak load reductions without
64 moving outside of the comfort zones established by the American Society of Heating,
65 Refrigerating, and Air Conditioning Engineers (ASHRAE) basic comfort guidelines. See
66 CUB Exhibit 1.02 (Good Sense presentation, Slide 6); CUB Exhibit 1.03 (Jason Black
67 Paper, Figure 5). These studies show that a cycling program may impact temperature
68 levels within a structure by 1 to 3 degrees, well within the ASHRE guidelines. *Id.*

III. COMED'S NATURE FIRST EXPANSION COST ESTIMATES APPEAR TO BE INFLATED

Q. WHAT PROBLEMS HAVE YOU IDENTIFIED WITH COMED'S PROPOSED COSTS TO EXPAND THE NATURE FIRST PROGRAM?

A. There are two problems with the cost estimates presented by Mr. Eber:

- 1) The proposed one-time operation and maintenance ("O&M") promotional cost to acquire new Nature First customers would allow the company to over-recover its costs.
- 2) Mr. Eber inappropriately escalates O&M expenses by 2.5% to adjust for inflation, without considering productivity gains.

Q. WHAT IS THE ONE-TIME O&M PROMOTIONAL COST?

A. According to Mr. Eber, one-time O&M costs include a one-time promotional cost of \$80 per participant. Mr. Eber goes on to say:

ComEd plans to expand the Nature First program to the level required to meet the statutory goals by increasing promotion of the program and outreach to customers. As we have done in the past, ComEd will continue to use demographic information to send direct mailings that specifically target those customers likely to have the correct home configuration for the program. ComEd Ex. 3.0 at L. 165-169.

Q. WHAT PROBLEMS HAVE YOU IDENTIFIED WITH THE PROPOSED ONE-TIME O&M PROMOTIONAL COST?

A. There are two problems. First, it seems excessive. According to ComEd Ex. 3.1, using this assumed \$80.00 per customer, total promotional costs would equal \$647,334 in 2008, \$630,975 in 2009, and \$579,585 in 2010. This is a huge promotional campaign, well in excess of the "direct mailings that specifically target those customers likely to have the

correct home configuration for the program” which Mr. Eber discusses. The company is proposing to sign-up between 6,900 and 8,100 customers per year. Based on the generous cost estimate of \$1.00 per mailing, this equates to a 1.20 to 1.25% return rate, which is far lower than the company should reasonably expect. As I will discuss below, it is reasonable to expect many more customers to be interested in signing up for the program. When asked to support this estimate in CUB Discovery Request 1.19 (CUB Ex. 1.04), the company responded that the estimate is based on “ongoing confidential negotiations.” Clearly, more detail is needed to support this cost. The Commission cannot ensure that rates are just and reasonable if the Company’s only basis for those rates is a secret negotiation. ComEd’s rebuttal testimony must rectify this issue.

Second, ComEd proposes to recover the \$80.00 promotional cost from every customer that signs up for the program. Thus, if ComEd is successful, and signs up more than the targeted number of new Nature First customers, it will recover \$80.00 for each customer over its target, even though it did not incur any additional cost to acquire them. To rectify this, the Commission must limit the recovery of the one-time promotional O&M cost to only the number of customers targeted by ComEd’s marketing efforts.

Q. IS IT REASONABLE TO EXPECT THAT COMED MAY EXCEED ITS PROJECTED TARGETS FOR THE NATURE FIRST EXPANSION?

A. Yes. In its energy efficiency and demand response filing, the Ameren Illinois Utilities have proposed a residential demand response program similar to ComEd’s Nature First

program. Ameren's filing indicates that "[a] customer hit rate of 7 to 10% is considered typical." Docket No. 07-0539, Ameren Ex. 2.1 at 102.

ComEd's current Nature First program only has approximately 57,000 Customers (ComEd Ex. 3.0 at L. 148), or approximately 1.7% of ComEd's 3.4 million residential customers. It is reasonable to expect that, with the promotional activity that ComEd has proposed, there may be as many as 180,000 additional customers willing to sign up for the program ((7% - 1.7%)* 3.4 million customers). Such an outcome seems entirely likely, given the recent focus on energy rates and the bill credits that customers can receive by signing up for Nature First.

Q. WHY IS IT INAPPROPRIATE TO INCLUDE INFLATION IN THE O&M COST ESTIMATES?

A. Mr. Eber's proposed O&M costs include an inflation escalation factor of 2.5% for both "One Time O&M Promotional Costs" and "Annual Ongoing O&M Cost for IT and Switch Maintenance and Repair." ComEd Ex. 3.1. This is inappropriate because it increases costs without similarly recognizing the cost savings that the company will undoubtedly receive from productivity gains. According to the Bureau of Labor Statistics most recent release of "Productivity and Cost By Industry: Selected Service-Providing and Mining Industries, 2005," unit labor costs for power generation and supply utilities (NAICS number 2211 - which I understand to include electric power generation, transmission and distribution functions) actually fell by 3.7% between 2004 and 2005. The Commission cannot include cost increases in a rider without the offsetting symmetric

cost savings that occur through productivity gains. Collecting the costs of the program through the rider, with an annual true-up, assures that the company will already be recovering inflation, offset by productivity. Thus, including ComEd's proposed one-sided inflation adjustment will lead to over-recovery of costs.

IV. RIDER EDA DOES NOT INCLUDE ALL OFFSETTING REVENUES THAT COMED COULD RECEIVE FROM PJM ENERGY AND CAPACITY MARKETS

Q. HOW DOES RIDER EDA FAIL TO INCLUDE ALL OFFSETTING REVENUES FROM PJM?

A. Mr. Crumrine's testimony (ComEd Ex. 5.0 at L. 195-198) discusses how ComEd's Rider EDA Cost Recovery Tariff (Appendix F to ComEd Ex. 1.0) includes the PJM revenues from the incremental expansion of the Nature First Program. However, it is not clear from ComEd's filing that the company intends to maximize the revenue it receives from PJM to the benefit of customers.

Q. WHAT EVIDENCE IS THERE THAT COMED DOES NOT INTEND TO MAXIMIZE REVENUES FROM PJM?

A. In his testimony, Mr. Eber states:

Q. Should the fact that Nature First is not dispatched every year affect whether ComEd uses the program to meet its statutory goals of a 0.1% reduction in peak demand per year?

A. No. Calling the program unnecessarily during the summer would drive up the marginal costs of the program. It is likely that increasing the number of times the Nature First Program participants are called during a summer would decrease customers' willingness to participate in the program for the amount of incentive currently provided and

181 increase the churn rate of program participants. ComEd
182 Ex. 3.0 L. 199-210.
183

184 Mr. Eber's answer indicates that ComEd will not attempt to maximize energy market
185 revenues by self-scheduling Nature First load reductions.
186

187 **Q. WHAT DO YOU MEAN BY ENERGY MARKET REVENUES?**

188 A. Energy market revenues are revenues that ComEd could receive from PJM's economic
189 demand response program by cycling switches. This is explained in more detail in
190 ComEd's Response to CUB Discovery Request 1.09:

191 In 2007, ComEd enrolled Nature First in both PJM's capacity
192 program and PJM's economic demand response program. The
193 economic demand response program allows ComEd to self-
194 schedule demand response events and provides for energy
195 payments. The energy payments for the maximum number of
196 events allowed under Rider AC7 in 2007 (i.e., 20 events) are
197 estimated in the attached spreadsheet (CUB 1.09_Attach 1). In
198 preparing the attached spreadsheet, ComEd used the hottest twenty
199 summer weekdays. The estimated energy payment from PJM if
200 the Nature First Program were called for the maximum number of
201 events in 2007 would have been \$527,308.
202 CUB Ex. 1.05, ComEd Response to CUB 1.09.
203

204 ComEd's data response shows that, in 2007, ComEd could have received approximately
205 \$10.41 per kW of capacity if it had called the program during the hottest twenty summer
206 weekdays. ($\$10.41 = \$527,308 / 54,977$ kW of capacity). This means that failing to use
207 the program during the summer would forego more than \$100,000 in annual revenue that
208 could be used to offset the cost of the program. Multiplying ComEd's program targets by
209 \$10.41 per kW equates to approximately \$121,817 in energy revenue in 2008, \$115,842
210 in 2009, and \$103,818 in 2010. This revenue will vary each year as energy prices

change, but represents a significant amount of ComEd's total annual revenue requirement for the program. For example, in 2010, when costs are highest and revenues are lowest, estimated energy revenues of \$103,818 would equate to 8.79 % of the \$1,180,787 total revenue requirement billed to customers. ComEd Ex. 3.1 (revenue requirement).

Q. WHAT SHOULD THE COMMISSION DO TO REMEDY THIS PROBLEM?

A. The Commission should order ComEd to schedule demand response events for Nature First to maximize energy revenues. The Company faces two problems that must be recognized. First, ComEd cannot know exactly when the hottest 20 days will occur. Second, the program must be available whenever PJM calls a reliability event. The Company should use its best judgment in scheduling events to balance PJM's need for program availability and its best estimates of the timing of the hottest days of the year, while striving to maximize the energy revenues received from the PJM energy markets.

Q. HOW DO YOU ADDRESS MR. EBER'S CONCERNS THAT CALLING THE PROGRAM UNNECESSARILY WOULD DRIVE UP PROGRAM COSTS AND DECREASE CUSTOMERS' WILLINGNESS TO PARTICIPATE?

A. ComEd has not sufficiently supported these concerns. In discovery, we asked ComEd to provide all documents and studies supporting these statements, and the company was unable to do so. See CUB Ex. 1.06, ComEd Response to CUB DR 1.13 and CUB Ex. 1.07, ComEd Response to CUB DR 1.15. Accordingly, these unsupported assertions should not prevent the Commission from returning the large potential revenues available to offset the cost of the program to customers.

236 **V. CONCLUSION**

237 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

238 A. ComEd’s estimate of the cost of the Nature First expansion, which ComEd proposes to
239 recover through Rider EDA, appears to be inflated. The proposed one-time operation and
240 maintenance (“O&M”) promotional cost to acquire new Nature First customers would
241 allow the company to over-recover its costs, and ComEd inappropriately escalates O&M
242 expenses by 2.5% to adjust for inflation, without considering productivity gains. In
243 addition, Rider EDA does not appear to include all offsetting revenues that ComEd could
244 receive from the PJM Interconnection LLC (“PJM”), energy market. These problems
245 should be fixed to ensure that Illinois customers receive the maximum value from the
246 Nature First expansion proposed in this docket.

247

248 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

249 A. Yes.